

Labor Education Curriculum Design and Practice from an Interdisciplinary Perspective

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Abstract: The effective implementation of labor education in the new era urgently needs to break through the barriers of single disciplines and overcome practical difficulties such as “skill-oriented” and “formalistic” approaches. This paper takes the practical and spiritual attributes of labor education as its logical starting point, defines the core connotation of interdisciplinary labor education courses, and constructs a four-in-one curriculum framework of “goals-content-implementation-evaluation.” Using the interdisciplinary project “Rainwater Garden Chili Pepper Planting” as a case study, research shows that interdisciplinary labor education courses can effectively achieve the collaborative educational goals of “cultivating morality through labor, enhancing intelligence through labor, improving physical health through labor, and fostering aesthetic appreciation through labor.”

Keywords: Labor Education; Interdisciplinary; Curriculum Design; Five Educations Integration

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1. Introduction

Labor education is a key link in implementing the fundamental task of fostering virtue and cultivating people. The “Opinions on Comprehensively Strengthening Labor Education in Primary and Secondary Schools in the New Era” issued by the CPC Central Committee and the State Council in 2020 clearly proposed to “build an education system that comprehensively cultivates moral, intellectual, physical, aesthetic and labor education” and promote the deep integration of labor education with the teaching of various subjects^[1]. The 2022 edition of the “Compulsory Education Curriculum Scheme and Curriculum Standards” establishes its core position in the basic education curriculum system^[2].

Currently, although my country’s primary and secondary school labor education practice has made some progress, it still faces many bottlenecks: First, the implementation of the curriculum is limited by the boundaries of the subject, and it often presents the characteristics of “singularity” and “fragmentation”, failing to achieve organic integration with moral education, intellectual education, physical education and aesthetic education; Second, the teaching model is rigid, and some schools simply equate labor education with physical labor or skills training, neglecting the cultivation of labor values and the development of scientific thinking; Third, the imperfect collaboration mechanism between families, schools and communities, the weak teaching staff and the single evaluation system are problems that have prevented the full release of the educational value of labor education^[3].

2. Theoretical Foundation and Core Content of Interdisciplinary Labor Education Curriculum

2.1 Theoretical Basis

In his theory of “learning by doing”, Dewey proposed that “education is life” and “education is growth”, emphasizing that education should be rooted in practice and that students should construct knowledge and develop abilities by personally participating in labor practice and solving practical problems^[4,5].

The concept of “five educations integration” advocated in China emphasizes that moral education, intellectual education, physical education, aesthetic education and labor education are not independent of each other, but rather an organic whole that permeates each other and works together to educate people^[6, 8]. As the link of “five educations integration”, labor education naturally has the practical foundation to connect with the other four educations.

2.2 Explanation of Connotation

Interdisciplinary labor education courses refer to a curriculum system that takes labor practice as the core carrier, aims to cultivate students’ correct labor values, essential labor skills and comprehensive labor literacy, breaks through the boundaries of a single discipline, integrates knowledge, methods and thinking of multiple disciplines, and constructs a “labor + discipline” integrated curriculum system^[7].

2.3 Core Features

Based on the essential requirements of labor education and the integration logic of interdisciplinary courses, this paper extracts four major characteristics of interdisciplinary labor education courses: comprehensiveness of educational goals, relevance of course content, practicality of implementation process, and collaboration of educational subjects .

1. The comprehensiveness of educational goals.
2. Relevance of Course Content.
3. Practicality of the implementation process.
4. Collaboration among educational stakeholders.

3. Design Principles and Overall Framework of Interdisciplinary Labor Education Curriculum

3.1 Basic Principles of Curriculum Design

1. Cultivating Morality and Guiding Values.
2. Interdisciplinary integration and deep fusion.
3. Student-centered, tiered design.
4. Real-world scenarios, practice-oriented.
5. Principle of multi-party collaboration to ensure effectiveness.

3.2 Overall Framework of Curriculum Design

Based on the above principles, a four-in-one interdisciplinary labor education curriculum framework of “goals, content, implementation, and evaluation” is constructed to achieve the systematic and scientific nature of curriculum design. The core of the framework is “labor tasks,” and the outer layers are “curriculum goals,” “curriculum content,” “curriculum implementation,” and “curriculum evaluation,” which are interconnected and operate in a closed loop. “Integration of five aspects of education” runs through all four aspects, and “collaboration between home, school, and community” provides external support for the framework.

1. Course Objectives: Differentiated and categorized, focusing on core competencies.

The overall goal is set as “cultivating correct labor values, mastering essential labor skills, and developing comprehensive labor literacy” .

2. Course Content: Three main categories, integrating knowledge from multiple disciplines.

Based on the core classification of labor education and combined with the need for interdisciplinary integration, the course content is divided into three modules. Each module integrates the knowledge of the corresponding disciplines to form an

integrated content system.

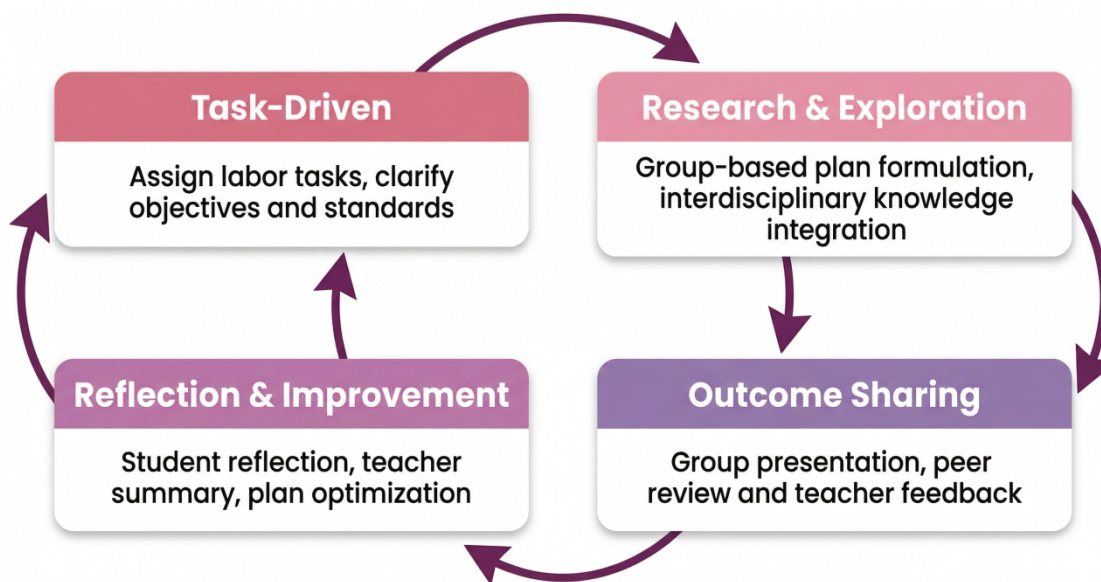
Table 1. Comparison of Interdisciplinary Labor Education Curriculum Content Modules and Subject Integration

Types of labor	Core content example	Interdisciplinary	Core competencies
Daily life labor	Campus plant maintenance, home cooking, clothing organization and storage	Chinese, Mathematics, Art, Biology	Work habits, aesthetic appreciation, and self-care ability
Productive Labor	Rain garden planting, handicraft creation, and ecological farm operation	Mathematics, Biology, Physics, Chemistry, Art	Scientific inquiry, innovative thinking, and labor skills
Service Labor	Community services for the elderly, campus public service campaigns, and rural revitalization research	Chinese Language and Literature, Morality and the Rule of Law, History, Geography	Social responsibility, communication skills, and patriotism

3. Course Implementation: Project-driven, four-stage closed-loop operation.

The interdisciplinary labor education curriculum is implemented with project-based learning as the core carrier, forming a closed-loop operation model of “ task-driven - inquiry practice - results exchange - reflection and improvement “.

Figure 1. Flowchart of interdisciplinary labor education curriculum implementation



4. Course Evaluation: Multi-dimensional and comprehensive, with an emphasis on process-oriented motivation.

A comprehensive evaluation of interdisciplinary labor education courses is achieved by establishing a “three-dimensional, six-subject” evaluation system . The “three dimensions” refer to labor attitude, labor skills, and overall quality. Through methods such as portfolio assessments, labor points, achievement displays, and practice reports, a combination of formative and summative evaluations is achieved.

4. Practical Paths and Case Studies of Interdisciplinary Labor Education Courses

4.1 Core Practice Path

1. Develop interdisciplinary project platforms to achieve deep knowledge integration .
2. Deepen the integration of labor education into multiple scenarios and build a comprehensive education system.
3. Highlight the synergy of the “four aspects” to unleash the value of integrated education.
4. Strengthen teacher and resource support to solidify the foundation for curriculum implementation.

4.2 Case Study Analysis

1. Project Background

This project takes “Research on the Management Techniques of Pepper Seedling Cultivation and Transplanting Using Rain

Gardens” as an example . It is based on the “Campus Rain Garden” practice base in middle schools, is offered to first-year high school students, has a course cycle of 12 weeks, with 2 class hours per week, and adopts the implementation model of “interdisciplinary teaching team + group cooperation”.

2. Project Design and Implementation

With “chili pepper planting and management” as the core task of labor, knowledge from four major disciplines—mathematics, biology, science, and ethics and law—is integrated to construct a fusion model of “labor practice + scientific inquiry.” The specific implementation process is as follows.

3. Project Implementation Results

A total of 286 students participated in this project, resulting in 286 planting logs and 72 scientific research reports. The survival rate of the transplanted chili peppers reached 89%. Through the implementation of the project, students not only mastered the labor skills of chili pepper cultivation but also applied multidisciplinary knowledge to practice, achieving a comprehensive understanding of the subject matter. During group collaboration and inquiry, students’ teamwork, problem-solving abilities, and scientific inquiry literacy were significantly improved. Simultaneously, students experienced the hardships and joys of labor, established the concept that “labor creates value,” and their ecological awareness and sense of social responsibility were significantly enhanced.

5. Practical Results and Reflections

5.1 Practical Results

Students’ overall quality has significantly improved. The implementation of interdisciplinary labor education courses has effectively addressed the problem of traditional labor education’s emphasis on skills while neglecting overall quality. Through labor practice, students not only master basic skills in life, production, and service labor, but also enhance their comprehensive abilities in knowledge application, scientific inquiry, and teamwork, and establish correct labor values .

5.2 Reflections on Practice

Despite the achievements of interdisciplinary labor education courses, several issues remain to be addressed: Insufficient depth of interdisciplinary integration, with some interdisciplinary projects exhibiting only superficial integration; the connection between subject knowledge and labor tasks is not close enough, failing to achieve in-depth application of knowledge and synergistic development of thinking; Lagging teacher development, with some teachers lacking experience in interdisciplinary instructional design and guidance, insufficient participation of industry experts in course implementation, and a need to strengthen the development of a multi-skilled teaching staff; An imperfect evaluation system, with the operability of process-based evaluation needing improvement, unclear quantitative evaluation standards for labor literacy, and insufficient incentive effect of evaluation results; and uneven integration of off-campus resources, with differences in off-campus labor practice resources between urban and rural schools, where rural schools possess abundant agricultural production resources, while urban schools lack relatively scarce off-campus production and labor bases.

6. Conclusion

The design and practice of labor education courses from an interdisciplinary perspective is an inevitable trend in the innovative development of labor education in the new era. Practice shows that interdisciplinary labor education courses can effectively break through the barriers of a single discipline and achieve deep integration of labor education with subject teaching, class management, and social life ^[9]. In the future , it is necessary to continue to deepen the research and practice of interdisciplinary labor education courses, solve the bottleneck problems in teachers, evaluation, and resources, and continuously improve the curriculum system and implementation strategies so that labor education can truly take root.

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Conflict of Interests

The authors declare that there is no conflict of interest regarding the publication of this paper.

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